UNIVERSITI TEKNOLOGI MARA

PRESERVING THE CONFIDENTIALITY OF FINAL EXAMINATION QUESTION PAPER USING IMAGE STEGANOGRAPHY TECHNIQUE

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STUDENT'S DECLARATION

I certify that this report and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ABSTRACT

Nowadays, examination is one of the important process in education. It is either done orally, in the form of written paper and practiced-based examination as well as participating in a course work. The rapid and constant paces of technology changing are creating both opportunities and challenges for schools and higher education community such as the universities. One of the challenges is the leakage of question papers before the final examination being conducted. The quality of the education system and the achievement of its objective are exposed to a serious threat with actions and practices that weaken the credibility of examination. In some countries, a centralized examination system is used and most education community does not realize the occurrence of final examination question paper leakage. It can affects the candidates in the whole country where the exam can be postponed or cancelled due to the leakage of question papers. The government are losing a lot of money to replace the leaked final examination question papers. The confidentiality of the question papers must be strictly maintained. Thus, this project emphasize strongly on developing a desktop based application that can hide final examination question paper in a digital bitmap cover image by using Image Steganography technique intended for the use of lecturer during the preparation of final examination question paper. This project focus on the Least Significant Bit algorithm in Image Steganography while providing a practical understanding of what Steganography is and how to accomplish it. The significance of this project is to help prevent unauthorized access, use and modification of the question paper before the final examination being conducted. It can preserve and enhance the confidentiality of the final examination question paper and can save lecturer time and it is cost efficient. The project overall objectives are achieved and it is successfully applied on .pdf and .doc file format of the final examination question paper. More testing on robustness of this project will be done in the future.

Keyword: Image Steganography, Least Significant Bit, confidentiality, final examination question paper

TABLE OF CONTENTS